

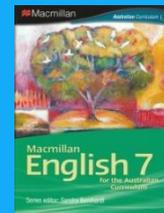
**Celia Berrell
writes**



Her poems are found in
CSIRO's *Double Helix*
magazines



and school textbooks



Australia



Ireland



Canada



Malaysia

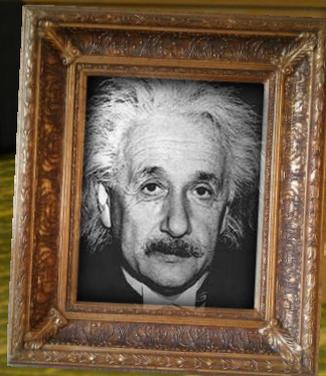
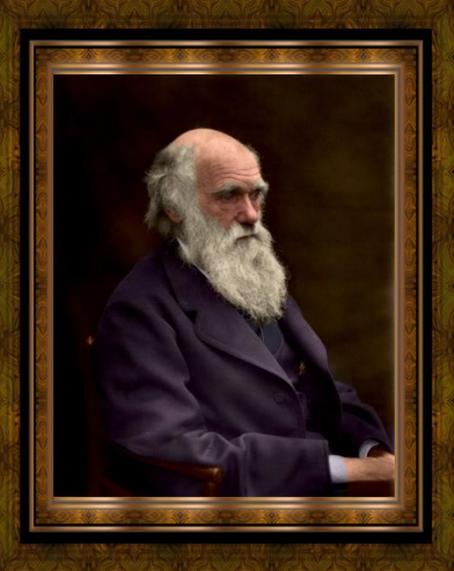
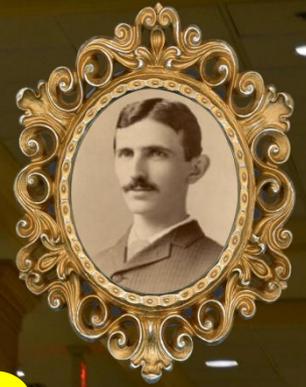


India

**and YOUR POEMS can be shared
on the Science Rhymes website**

www.sciencerhymes.com.au

A Science Hall of Fame



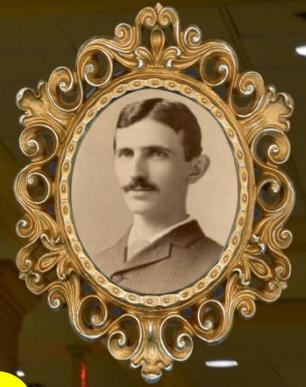
with Celia Berrell &

science
RHYMES

www.sciencerrhymes.com.au



A Science Hall of Fame



Anton van Leeuwenhoek



Alexi Leonov



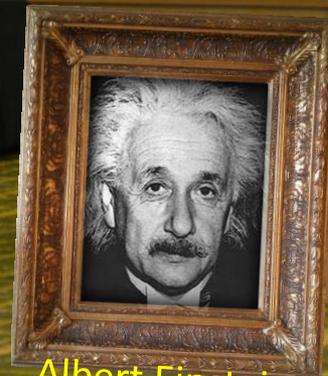
Archimedes



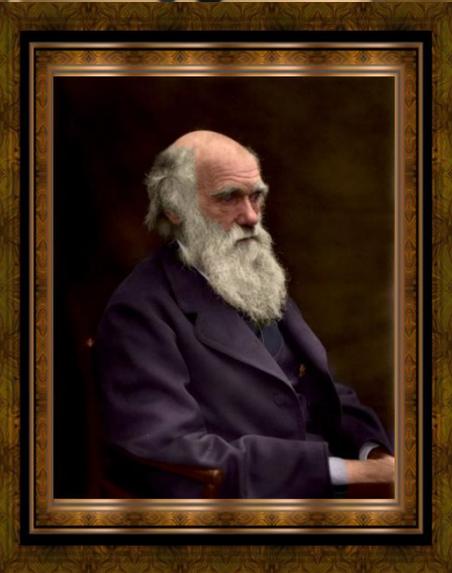
John O'Sullivan



Isaac Newton



Albert Einstein



Charles Darwin

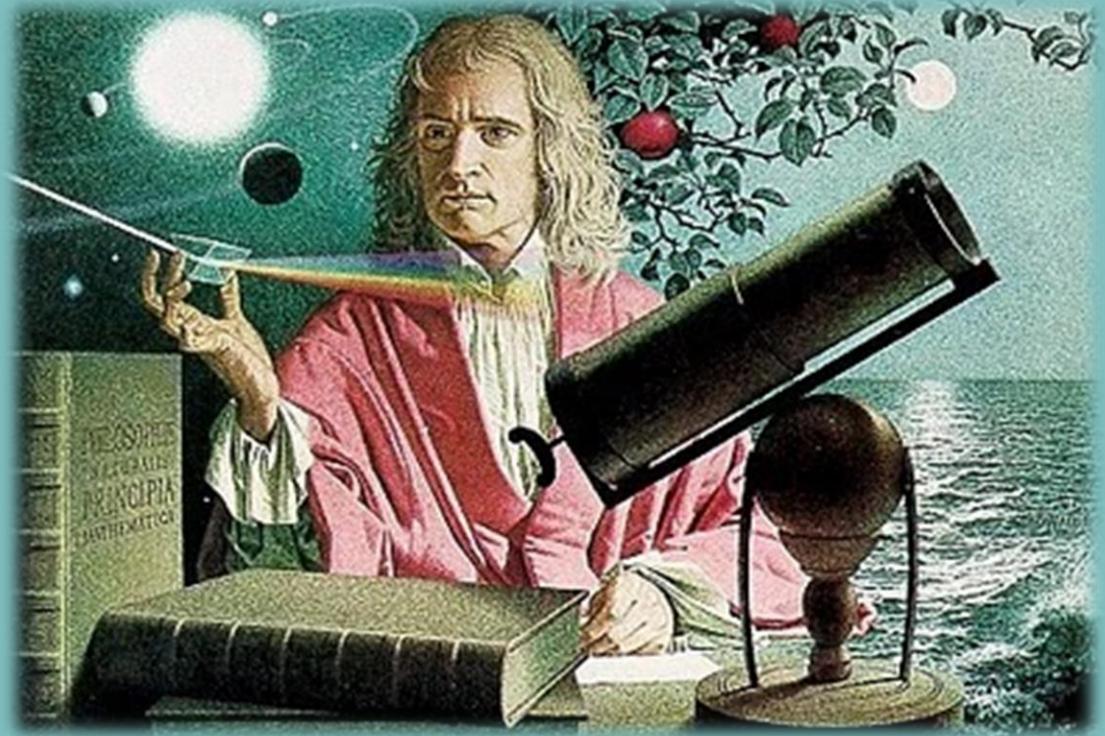
Nikola Tesla's cat Macak



Physicist, astronomer,
and natural philosopher;
Newton was a whiz at maths.
A science hero from the past!

Newton's Epitaph
by Alexander Pope

NATURE and
Nature's Laws
lay hid in night.
God said,
"Let Newton be!"
and all was light.



Sir Isaac Newton

1643 - 1727 England

"If I have seen further, it is by standing upon the
shoulders of giants"

Is. Newton

Sir Isaac Newton's Laws Of Motion *by Celia Berrell*

Newton was a clever man.

An avid scientific fan.

He questioned many things he saw.

Like ones we had no answers for.

He thought them through right to their cores.

Then gave us many handy laws.



Newton's First Law Of Motion:

Without a force of push or pull
an object will remain quite still.

With just one push at just one time
that object moves in one straight line.

Newton's Second Law Of Motion:

A bigger Force **a**ccelerates
an object that is heavy-weight.

While objects of a smaller **m**ass
don't need much **F**orce to move them fast.

So Newton noticed they obey
that **F**orce will equal **m** times **a**.

Newton's Third Law Of Motion:

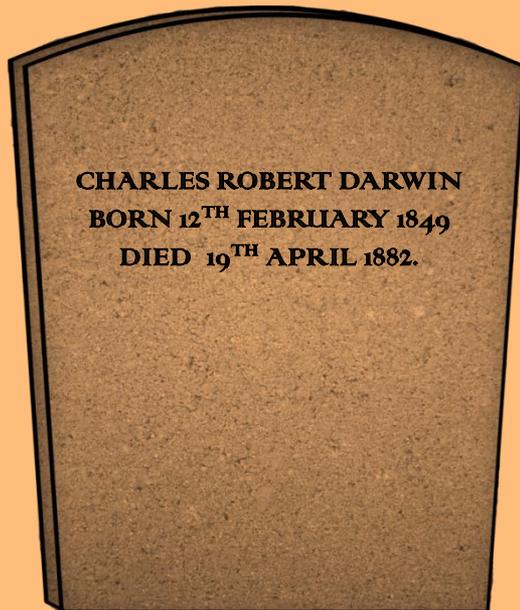
Now bend a stick. Before it cracks
you'll feel its force of pushing back.
For every action there will be
an equal one – opposingly.



Without his formulas in place
we'd soon get lost in outer space.
So Isaac's Laws help us traverse
the reaches of our universe!

A gentleman and naturalist
aboard HMS Beagle,
Charles found Evolution
was evidently feasible!

Darwin's gravestone in
Westminster Abbey
modestly reads:



Charles Darwin

1809 - 1882 England

**"A man who dares to waste one hour of time has not
discovered the value of life."**

On Origins and Evolution *by Celia Berrell*

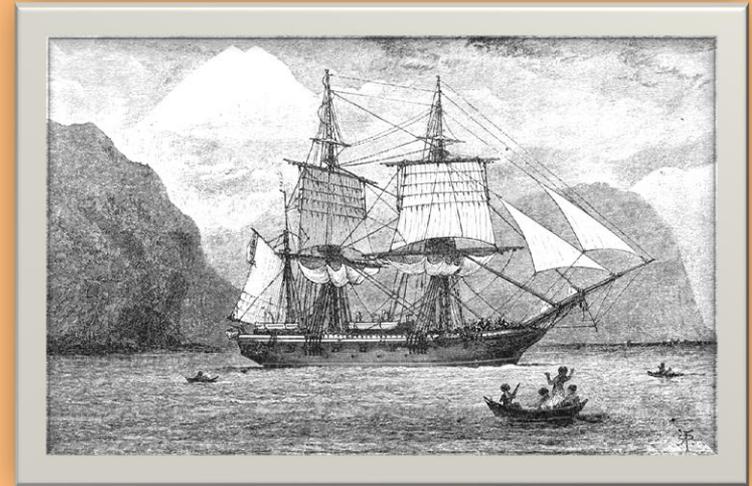
In eighteen hundred and thirty one when Charles was only twenty-two he sailed upon the Beagle's run to chart the lands and ocean blue.

Collecting samples on the way of creatures, plants and fossils found he drew and wrote his notes each day of all the life-forms that abound.

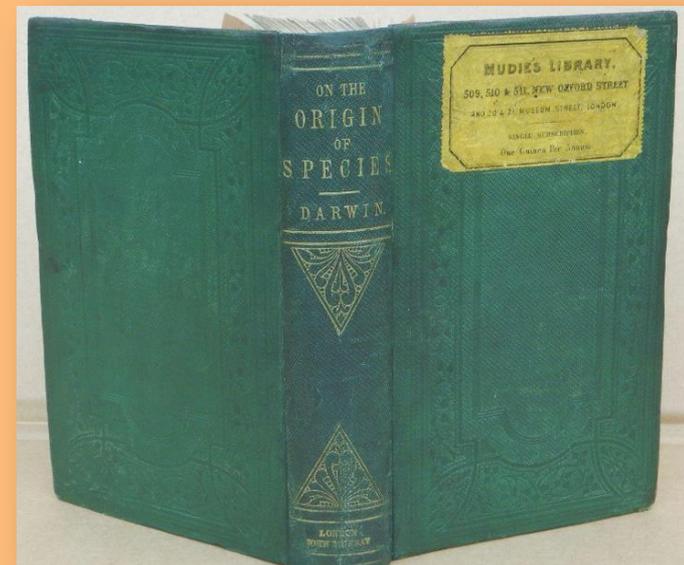
This five-year trek to foreign lands made Darwin sick, which wasn't good. But dedication, task in hand, he always did the best he could.

Returning home, he thought a lot and started to experiment to test his theories, note and jot what everything he learnt had meant.

“On The Origin of Species” was published, eighteen fifty nine. This work on Evolution still amazes us as most sublime.



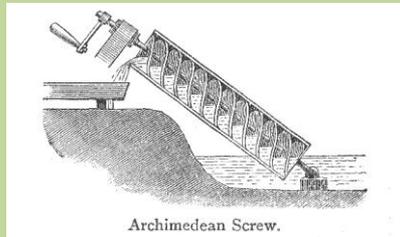
HMS Beagle at the Strait of Magellan South America



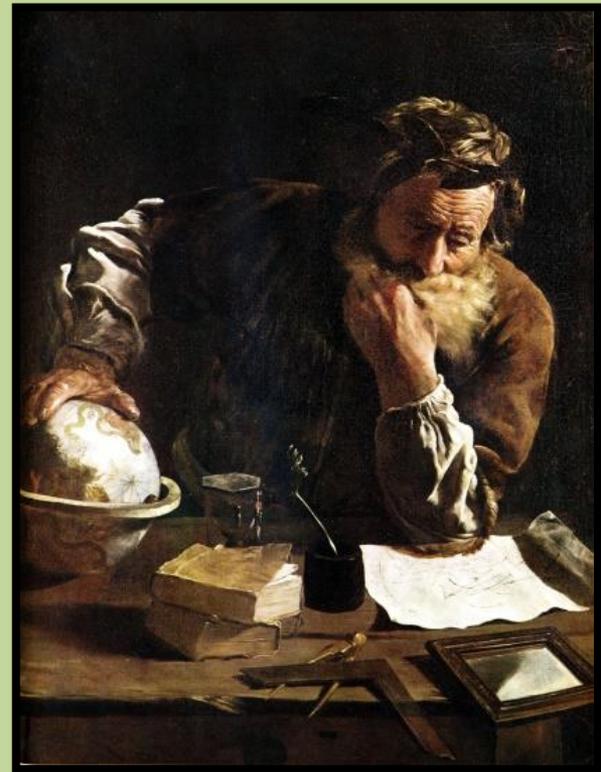
First Edition “On The Origin Of Species” by Darwin

Ancient Greek astronomer, inventor and an engineer, Archimedes served his king. To shout EUREKA! was his thing.

Archimedes designed a device to raise water for irrigation



Archimedes' Screw



Archimedes

287 - 212 BC Greece

"Give me a place to stand, and a lever long enough, and I will move the world."

ΑΡΧΙΜΗΔΗΣ

Archimedes and the Crown *by Celia Berrell*

Back in times of ancient Greece
a golden crown made like a wreath
had caused the king to gnash his teeth
suspecting there's a missing piece.

He gave his goldsmith solid gold
to craft a crown of laurels bold.
The weight of which was so precise
the craftsman couldn't steal a slice.

But did that craftsman play some tricks
by melting silver in the mix?
That way he could remove some gold
and make a profit when it sold.

King Hiero knew he couldn't tell
unless he broke the crown as well.
But Hiero thought of what to do
to keep his crown and justice too.

The king said "what I really need is
someone smart like Archimedes.
Fetch him now with greatest speed.
He'll work out how to prove this deed."



This poem was first published in the CSIRO
children's magazine *The Helix* June 2009



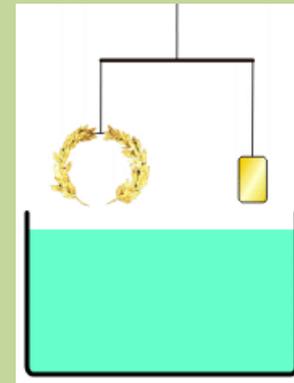
So Archimedes pondered on experiments that could be done that wouldn't scratch or harm the crown. He thought of none and gave a frown.

He knew the crown weighed just the same as that gold block from which it came. But mixed with silver surely meant its volume would be different.

Since silver is much lighter than pure gold, the crown's size would expand. Taking up more room than just the block of gold. But what's the test?

Poor Archimedes fearing doom sat in a bath to clear his gloom. Submerging all his body stout he noticed water trickled out.

Within a flash it came to him. He leapt out with a silly grin. "Eureka" Archimedes cheered. "I've found it. Now it's all so clear".



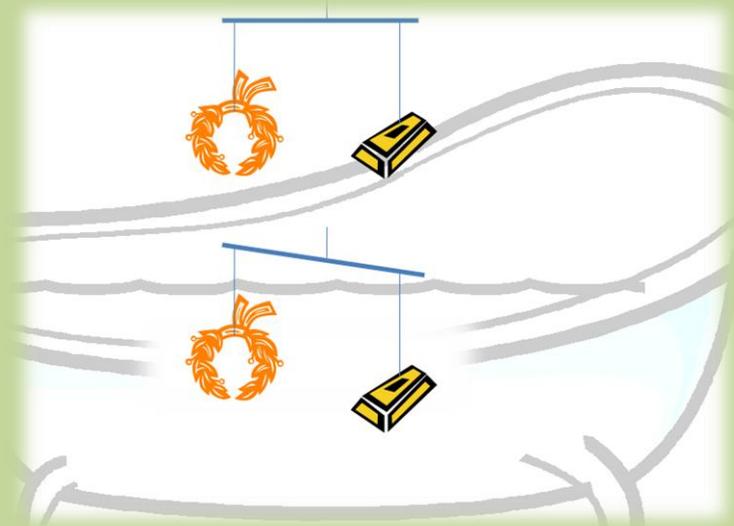
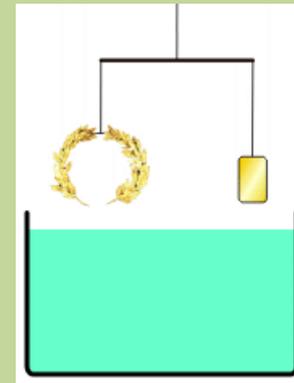
And hastily he ran through town
to fetch that problem golden crown.
And surely made some people blush.
Not dressed, he'd left in such a rush!

With balance scales held in the air
the crown and block were level there.
Because they both weighed just the same
it looked as though there was no blame.

By dunking block and crown in bath
the water forces change their path.
The block sunk lower than the crown.
It's density had dragged it down.

The water that the crown displaced
was more than what the block could raise.
So Archimedes proved for sure
that crown's not made from gold that's pure.

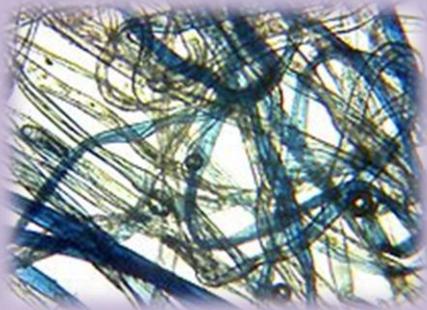
So when your mind gets stuck and freezes
take a break like Archimedes.
Sometimes when our thoughts run free
we make our best discoveries.



Lay-wen-hook from South Holland's Delft a fabric merchant, tasked himself to make a lens that magnifies five hundred times what's seen by eyes.

**Certificate
Of Appreciation**

To: **Anton Van Leeuwenhoek**
For revealing the world
of microscopic life
to scientists



magnified denim

Anton Van Leeuwenhoek

1632 - 1723 Netherlands

"In the year of 1657 I discovered very small living creatures in rain water"

Anton's Microscopes *by Celia Berrell*

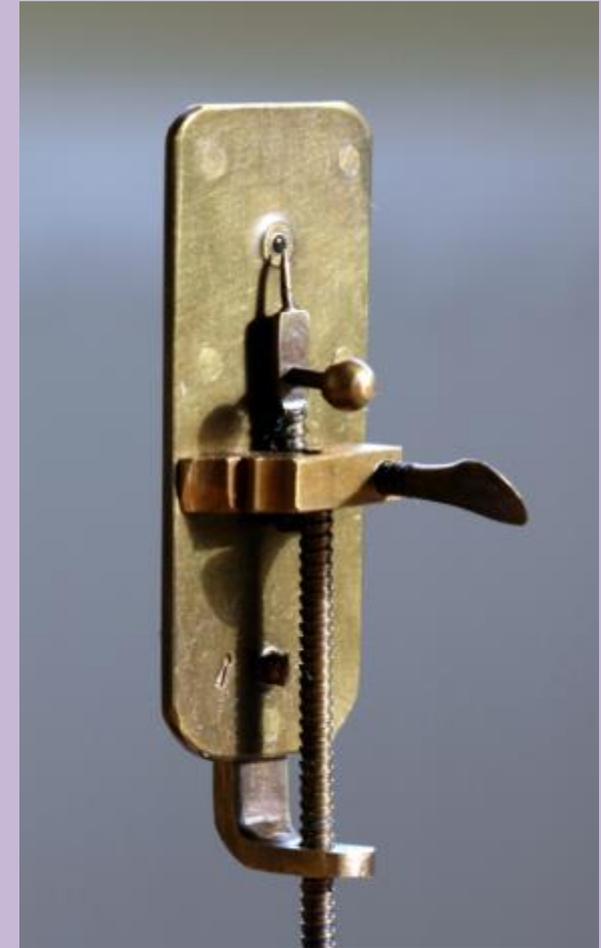
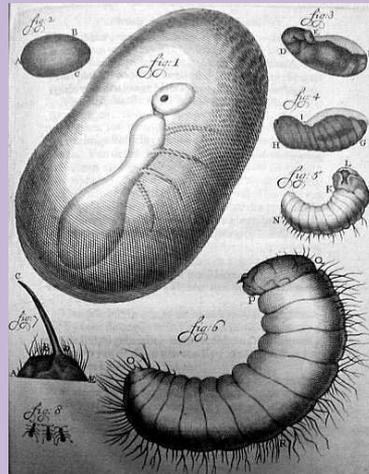
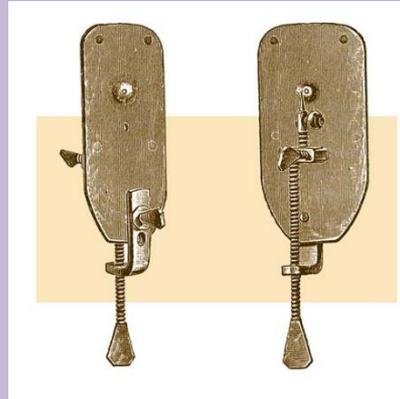
A Dutchman named Anton was someone you'd count on to tell you precisely the things he could see.

A microscope maker and shopkeeping draper discovering life that's as small as can be.

He magnified beasts that he scraped from his teeth and watched as they swam like some creatures in seas.

Learning there's animals formed from just single-cells. Seeing that even a flea can have fleas!

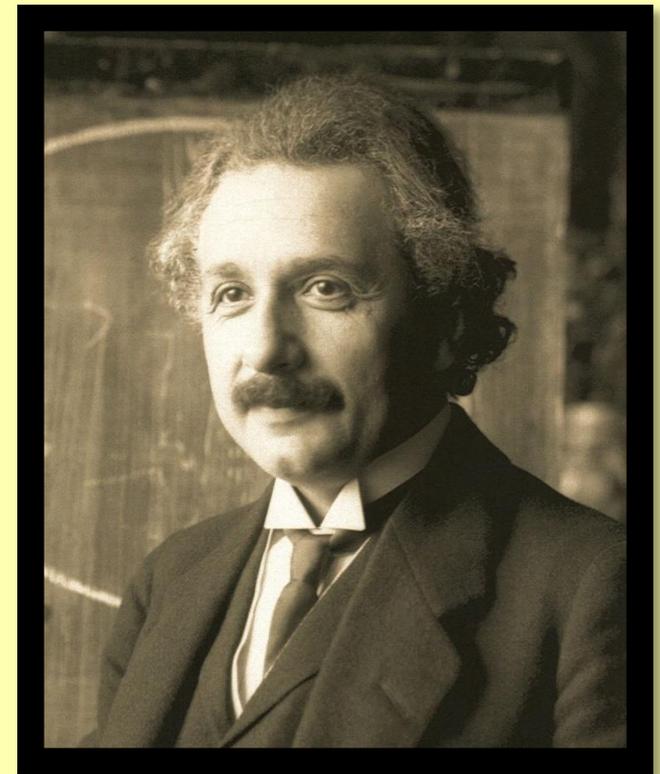
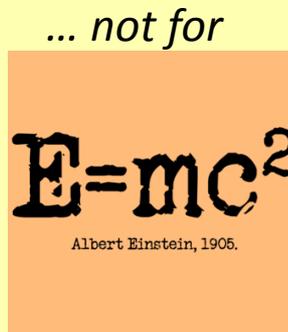
Finding bacteria in our interior. Sending this news across the sea.



Anton astounded us. What he had found in us started the science mi-cros-co-py.

Maths and physics were just a hobby but THIS Patent Officer wasn't sloppy! Einstein had an amazing mind. We think of him as "one-of-a-kind"!

Albert Einstein was awarded the **Nobel Prize** in 1921 *"for his work on theoretical physics, especially for his discovery of the law of the photoelectric effect"*



Albert Einstein

1879 - 1955 Germany & then USA

"Imagination is more important than knowledge"

A handwritten signature of Albert Einstein in black ink on a light-colored, slightly textured paper. The signature is written in a cursive, flowing style.

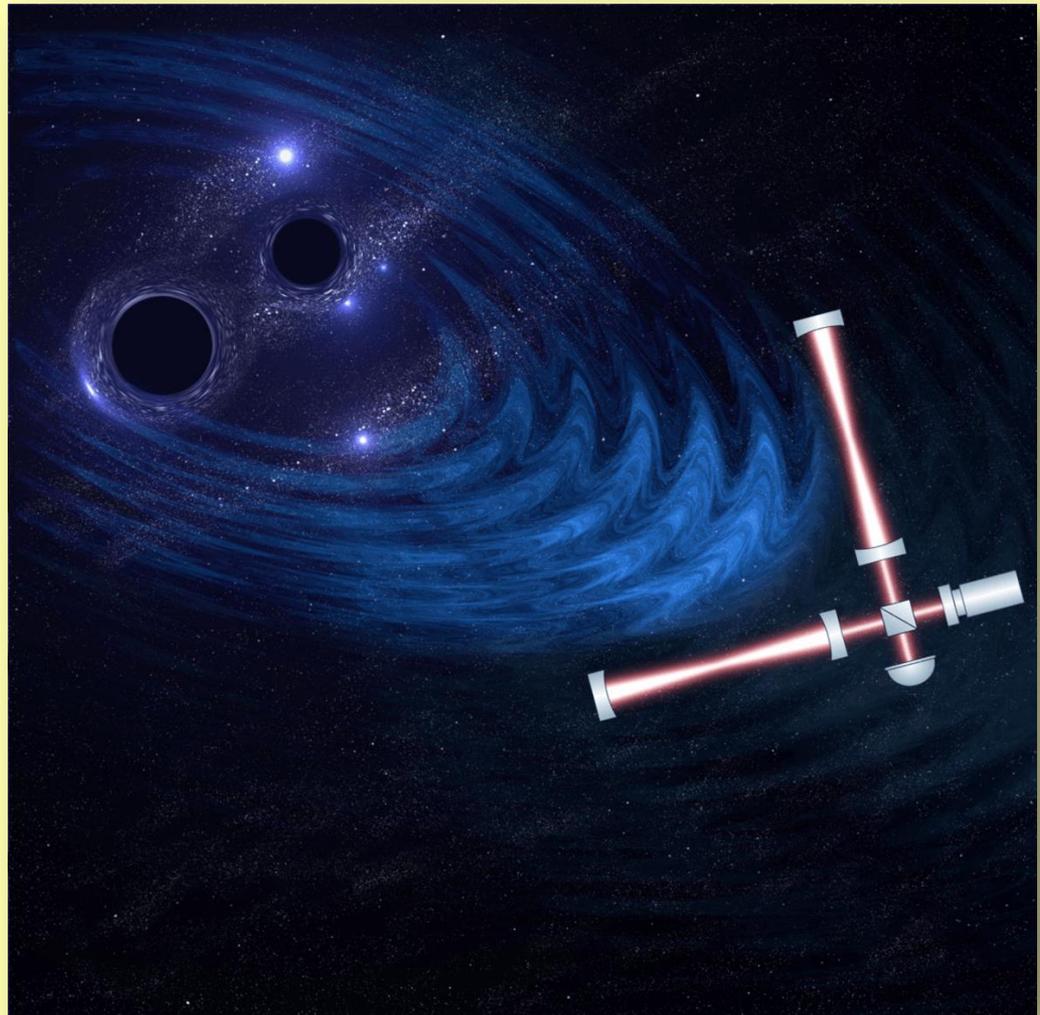
Gravity Waves *by Celia Berrell*

Time and space
like warp and weft
of cosmic fabric set adrift
should bend for mass
by Theory
of General Relativity.

Laser beams
at LIGO's base
have captured
distance changing pace.
A travelled length
in altered time
means gravity gave us a sign!

So LIGO's proved
how gravity
(that force of massive
mystery)
can kink and ripple
space-time's shawl.

A wave to Einstein's
know-it-all!



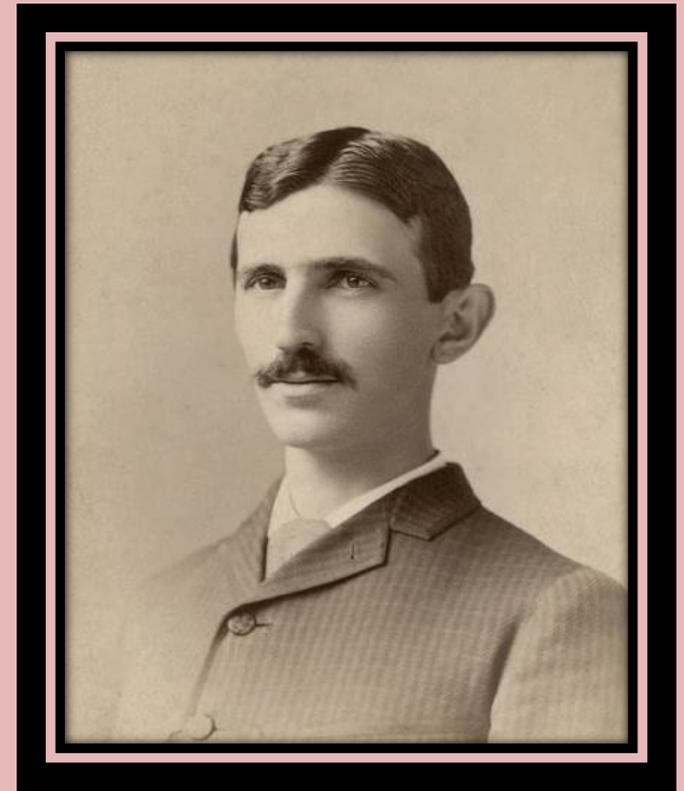
The Laser Interferometer Gravitational-wave Observatory ([LIGO](https://www.ligo.caltech.edu/)) in USA has detected Gravity Waves – just like Einstein predicted.

A genius and engineer;
AC current - his career.
Taming electricity
was Tesla's finest wizardry.

Since his death ...

The name
TESLA

has become a unit
measuring the
intensity of a
magnetic field;
a crater on the far
side of the moon
and a modern
electric car!



Nikola Tesla

1856 - 1943 Croatia & then USA

"I do not believe in laziness, and I should like to see the loafer wiped from the face of the earth; but I want that those who are willing to work should accomplish their results with the least labour and in the best way."

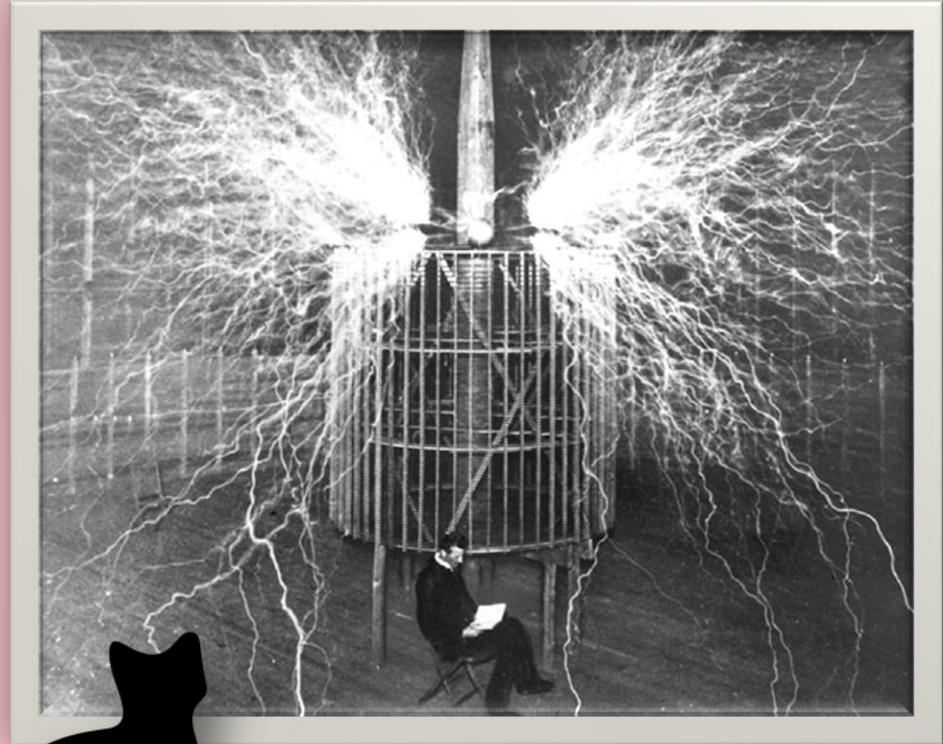
Handwritten signature of Nikola Tesla in cursive script.

Cat-a-static *by Celia Berrell*

Nikola loved his childhood cat
the sleek, majestic black-Macak.
A cat whose fur would click and spark
when days were chilly, dry and dark
as stroking black-Macak's fur coat
could cause a tiny lightning bolt.

Nikola Tesla loved his cat
the sparkling, zappy black-Macak.
That static electricity
inspired young Tesla, cleverly
inventing things quite technical.
Especially electrical.

From neon lights and radios
to radar and remote controls.
Transistors, robots, X-ray zones
and AC power to our homes.
Tesla had a genius knack
that started through his cat Macak!



Alexi, Soviet cosmonaut was asked to promise NOT to talk about the dangers that he fought performing the first short spacewalk.

Alexi was also an accomplished artist ...



Alexi Leonov

Born 1934 in Siberia, Russia

"The Earth was small, light blue, and so touchingly alone, our home that must be defended like a holy relic. The Earth was absolutely round. I believe I never knew what the word round meant until I saw Earth from space."

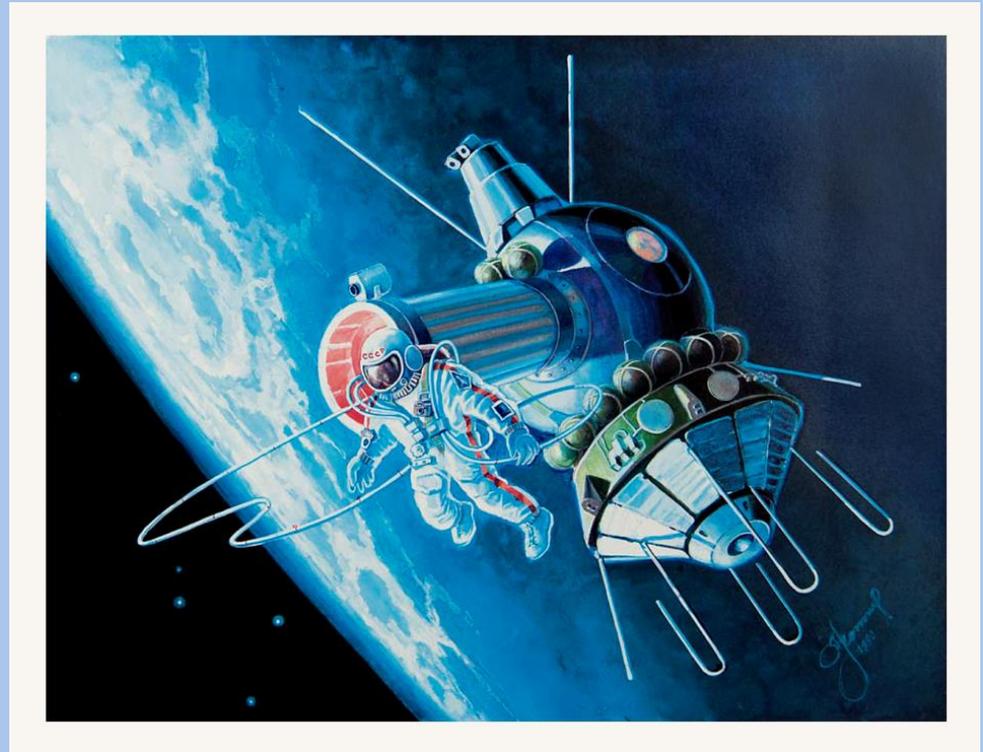
The First Ever Spacewalk *by Celia Berrell*

In March of 1965
Alexi Leonov survived
the zero pressure out in space
and won the human spacewalk race.

500 k above our world
Alexi floated, spun and twirled.
He felt just like a grain of sand;
a tiny speck in space so grand.

His Russian air-filled space-suit soon
expanded like a big balloon.
Calamity. He's now too big
to fit inside the capsule rig!

He'd lost the use of glove and boot;
was forced to leak air from his suit.
Intense twelve minutes: fear and fun.
He made it home. The race was won!



paintings by Alexi Leonov

Australian radio astronomer and electrical engineer, John O'Sullivan (with his team) made WiFi.

Give them a cheer!



John appears in an advert for Skoda cars themed

You don't have to be famous to be brilliant



John O'Sullivan

Born 1947 Sydney Australia

"It won't be me making the breakthroughs of the future, it will be the next generation. And it's very gratifying to know that what we started off a long time ago could lead to the next big discovery by an Australian scientist."

WiFi Wizardry *by Celia Berrell*

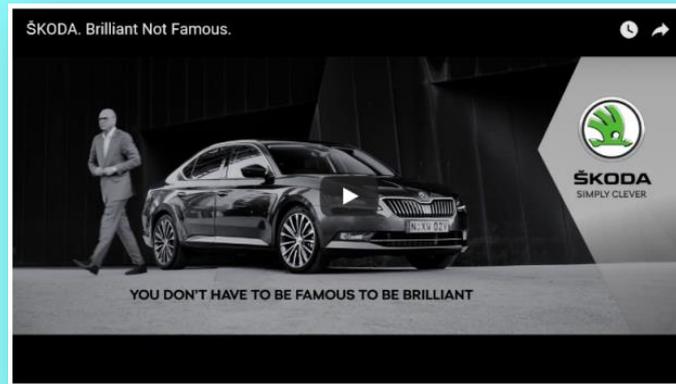
Invented in Australia
at CSIRO

fast WiFi can connect us
almost everywhere we go.

Electro-magnetism is
light-speed radiation
from X-rays, light and microwaves
to radio-wave sensations.

WiFi rides the frequencies
closest to your radio
compared to compressed light-waves
seen in a rainbow.

Thanks to John O'Sullivan's team
of scientists most clever
fast WiFi capabilities have
changed our world forever!



national science week

11–19 August 2018



An Australian Government Initiative



SCIENCE WEEK IN SCHOOLS



Celebrate Science Week with an event in your school. The 2018 schools theme is *Game Changers and Change Makers*.

YOUR MISSION:

Write a poem about

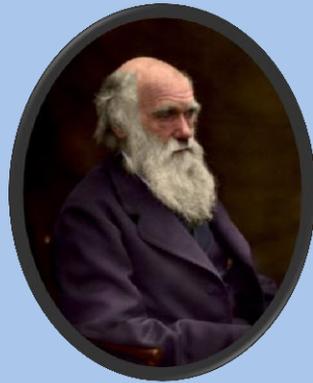
- a person (living or historical) or
- a science discovery or
- an aspect of science & technology that you believe is worthy of being in our **SCIENCE HALL OF FAME**.

See your poem published on the [Science Rhymes](#) website.

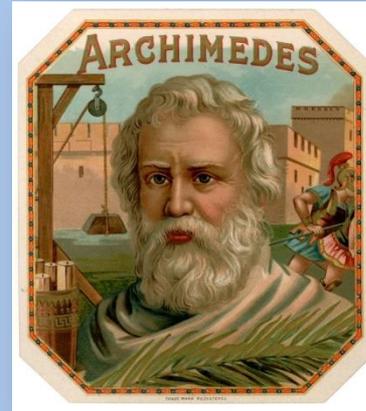
Be ready to recite your poem to an audience, at school during [National Science Week](#), or possibly for radio.



[Isaac Newton](#)



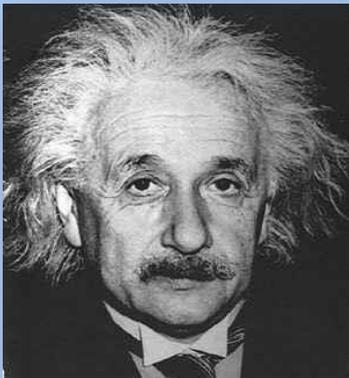
[Charles Darwin](#)



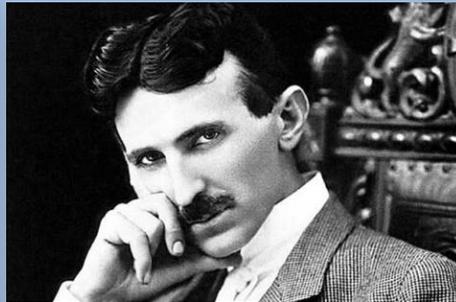
[Archimedes](#)



[Anton Van Leeuwenhoek](#)



[Albert Einstein](#)



[Nikola Tesla](#)



[Alexi Leonov](#)



[John O'Sullivan](#)

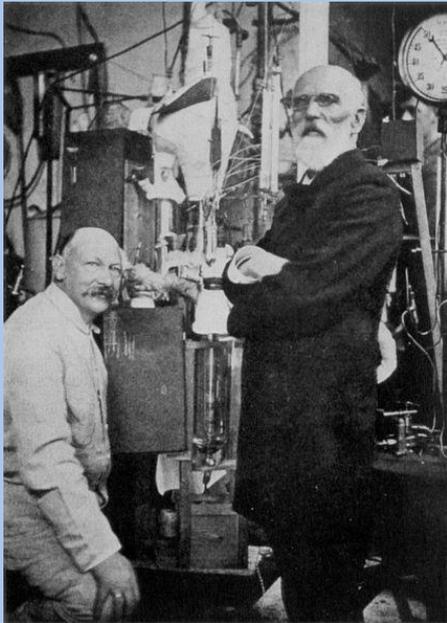
BIOGRAPHY & INFO LINKS



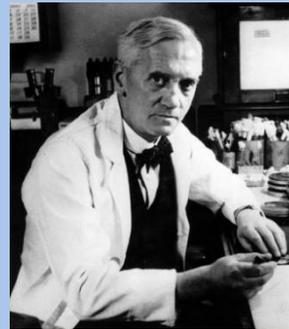
Charles Richter – earthquakes



Alfred Fielding & Marc Chavannes - bubble wrap



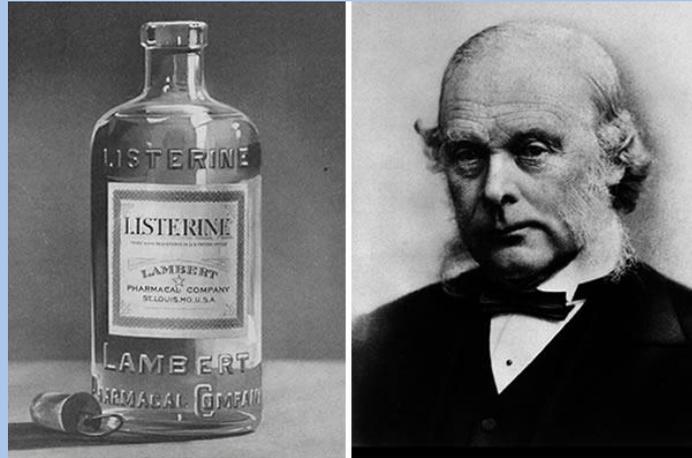
Johannes Diderik van der Waals – gecko feet



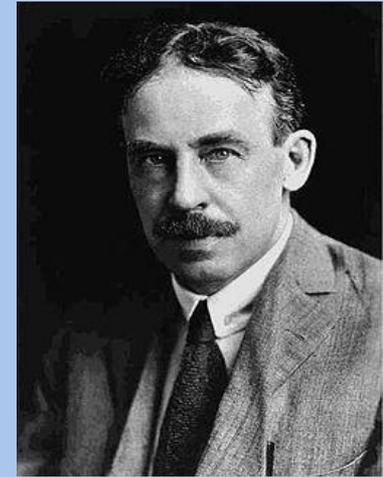
Alexander Fleming & Howard Florey - penicillin



[Sir David Attenborough - nature](#)



[Joseph Lister - antiseptic](#)



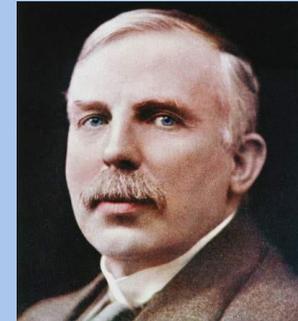
[William Morton - anaesthetics](#)



[Mary Anning - palaeontology](#)



[Hennig Brand - phosphorous](#)



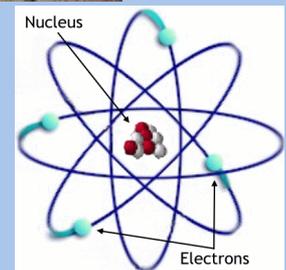
[Ernest Rutherford](#)



[Marie Curie - radioactivity](#)

You can choose
other people or perhaps an innovation that
has made a difference to our world or yours!

[the atom's structure](#)



A SCIENCE HALL OF FAME

Newton - Darwin - Einstein - Archimedes

Anton Van Leeuwenhoek - John O'Sullivan - Alexi Leonov - Nikola Tesla

for National Science Week 2018

GAME CHANGERS & CHANGE MAKERS

sharing science rhymes
and science information for
**Whitfield State School's
POETRY CLUB**

Includes the following poems by Celia Berrell:

Sir Isaac Newton's Laws of Motion

On Origins and Evolution

Archimedes and the Crown

Anton's Microscopes

Gravity Waves

Cat-a-static

The First Ever Space Walk

WiFi Wizardry

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